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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,603	07/30/2003	William F. Micka	TUC920030006US1	8680

7590 08/24/2006

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EXAMINER

CHANNAVAJJALA, SRIRAMA T

ART UNIT	PAPER NUMBER
2166	

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/630,603	MICKA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Srirama Channavajjala	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 11, 12, 14, 16, 20, 21, 23 and 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 11, 12, 14, 16, 20, 21, 23 and 25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

#### **Response to Amendment**

1. Claims 1-4,6,11-12,14,16,20-21,23,25 are presented for examination.
2. Claims 1-4,6,11-12,14,16,20-21,23,25 have been amended [6/12/2006].
3. Claims 5,7-10,13,15,17-19,22,24,26-28 have been cancelled [6/12/2006].

#### ***Drawings***

4. The Drawings filed on 7/30/2003 are acceptable for examination purpose.
5. Examiner acknowledges applicant's amendment to the drawing fig 1, 3, however, the drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because fig 1 though fig 3 they do not include the **LABEL** for the reference number mentioned in the specification, for example fig 1, 101A, 101B corresponds to first cluster and second cluster, element 132 processor, 134 corresponds to cache, 142 corresponds to processor, 144 corresponds to cache and like. A proposed drawing correction, corrected drawings, to add the Label[s] to respective reference sign(s) to figs 1 though fig 3 are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### ***Information Disclosure Statement***

6. The information disclosure statement filed on 7/30/2003 is in compliance with the provisions of 37 CFR 1.97, and has been considered and a copy is enclosed with this Office Action.

***Claim Rejections - 35 USC § 101***

7. In view of applicant's amendment to claim 11,20, the rejection under 35 USC 101 as set forth in the previous office action is hereby withdrawn.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 1 recites the limitation ""generating said first information by said computer" in line 8. There is insufficient antecedent basis for this limitation in the claim because there is no "first information" that refers to "generating said first information by.....
9. Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

At page 12, claim 25 is dependent on "cancelled clam 24", for compact Prosecution, examiner assumes claim 25 is dependent on claim 23, and treated in the office action as claim 25 dependent on claim 23.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. ***Claims 1-4,6,11-12,14,16,20-21,23,25, are rejected under 35 U.S.C. 102(b) as being anticipated by Ofek et al. [hereafter Ofek], US Patent. No. 5,889,935, published on March 30, 1999.***

12. As to claim 1,11,20, Ofek teaches a system which including 'a method to provide information to multiple data storage devices' [fig 1, col 6, line 13-19, line 22-25, col 7, line 3-7], Ofek specifically teaches multiple data storage devices that corresponds to fig 1, element 20, element 48;

'providing a computer comprising memory' [fig 1, element 28, 64], Ofek specifically teaches both primary data storage system, secondary data storage system element 14, 46 respectively have data cache elements 28, and element 64 as detailed in fig 1;

'providing a first data storage and retrieval system [fig 1, element 14, col 7, line 40-56], first data storage corresponds to Otek's primary data storage system, fig 1, element 14; ' a second data storage and retrieval system' [fig 1, element 46, col 7, line 40-56], Otek specifically teaches data transfer, retrieval between primary and secondary host through data signal path as detailed in col 7, line 40-58, second data storage

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corresponds to Ofek's fig 1, element 46; 'wherein said first data storage and retrieval system is capable of communicating with said second data storage and retrieval system' [col 7, line 43-48, line 57-61, line 61-67, fig 1], Ofek specifically teaches primary data storage and secondary data storage system are connected through communicative link element 40 as detailed in fig 1;

'generating said first information by said computer' [col 8, line 47-50], Ofek specifically teaches primary data storage automatically generates duplication or copying of data to the secondary data storage system that corresponds to generating first information by the computer because both primary and secondary data storage system have the ability to synchronously the data ;

'saving said first information in said memory' [col 8, line 50-55], Ofek specifically teaches storing data in both primary and secondary data storage system as detailed in col 8, line 50-55;

'providing a least recently used protocol' [col 36, line 15-19, 33-36, fig 18], Ofek specifically teaches least recently used queue particularly this least recently used queue contains pointer to cache that are available to be allocated i.e., LRU identifies cache block to be allocated as detailed in col 36, line 33-38;

determining using said least recently used protocol if said first information should be written to one or more information storage media' [col 36, line 38-47], Ofek specifically teaches cache block requires both read and write operations as detailed in col 36, line 38-47;

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operative if said first information should be written to one or more information storage media, providing first information to said data storage and retrieval system' [col 32, line 30-48], Ofek specifically teaches inspecting primary and secondary data copies of files, log files and transferring the or copying the data files;

'determining if said first information must be synchronously provided to said second data storage and retrieval system' [col 14, line 3-10], Ofek suggests synchronous mode, more specifically synchronizing data on both primary and secondary data storage as detailed in col 14, line 3-10;

'operative if said first information must be synchronously provided to said second data storage and retrieval system, generating a write command comprising a synchronous copy attribute' [col 15, line 32-37, col 16, line 33-41, col 17, line 52-67, fig 7-8], Ofek suggests synchronous mode identifies primary, and secondary volume in the remotely mirrored volume and write operation to a volume defined as mirrored volume;

'operative if said first information need not be synchronously provided to said second data storage and retrieval system, generating a write command comprising as asynchronous copy attribute' [col 8, line 35-41, 47-50, col 14, line 59-64].

13. As to claim 2,12,21, Ofek disclosed 'writing said first information to said first data storage and retrieval system' [col 9, line 8-14]; 'writing said first information to said second data storage and retrieval system' [col 9, line 55-59, 65-67, col 10, line 1-3]; generating a write complete signal' [col 10, line 40-45].

14. As to claim 3, Ofek disclosed 'wherein said first information is provided to said first data, data storage and retrieval system by a host computer, further comprising the step of providing said write complete signal to said host computer' [col 14, line 24-34].

15. As to claim 4, 14, 23, Otek disclosed 'write command does not comprise a synchronous copy attribute, and wherein said first data storage device comprises a first information storage medium' [col 24, line 30-40]; 'writing said first information to said first information storage medium' [col 16, line 62-67, col 17, line 1-12]; 'determining if said first information has been written to said first information storage medium' [col 17, line 19-23]; 'operative if said first information has been written to said first information storage medium, generating a write complete signal' [col 17, line 40-51].

16. As to claim 6, 16, 25, Otek disclosed 'scheduling the transmission of said first information to said second data storage and retrieval system' [col 27, line 18-25]; providing said first information to said second data storage and retrieval system' [col 10, line 62-67, col 11, line 1-4]; 'writing said first information to said second data storage and retrieval system' [col 9, line 55-59, 65-67, col 10, line 1-3]



***Response to Arguments***

17. Applicant's arguments at page 15-17 with respect to claim 1-4,6,11-12,14,16, 20-21,23,25 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

**The prior art made of record**

a. US Patent No. 5,889,935

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srirama Channavajjala whose telephone number is 571-272-4108. The examiner can normally be reached on Monday-Friday from 8:00 AM to 5:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam, Hosain, T, can be reached on (571) 272-3978. The fax phone numbers for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)

SC  
Patent Examiner.  
August 20, 2006.

  
**SRIRAMA CHANNAVAJJALA**  
**PRIMARY EXAMINER**